

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A support rack for supporting a circuit board having first and second opposite edges, the support rack comprising:

- a board engagement platform having an edge engagement member adapted for contact with respect to the first edge;
- a board retention element spaced from the engagement platform by a first distance, the board retention element having an edge retention member adapted for contact with respect to the second edge, the edge retention member spaced from the board retention element by a second distance and aligned with the edge engagement member;
- a first adjustment mechanism interconnected with respect to the board engagement platform and the board retention element, the first adjustment mechanism permitting adjustment of the first distance; and
- a second adjustment mechanism connected with respect to the board retention element and the edge retention member, the second adjustment mechanism permitting adjustment of the second distance and maintaining the second distance after adjustment;

whereby the first and second adjustment mechanisms ~~can be~~ are independently ~~adjusted such that the edge engagement member and the~~ adjustable to allow positioning of the edge retention member at a desired distance from the edge engagement member such that the edge engagement member and the edge retention member compress the circuit board by contacting the first and second edges, respectively, when the circuit board is supported by the support rack.

2. (currently amended) The rack of claim 1 wherein — the first adjustment mechanism includes apertures spaced from one another, the first adjustment mechanism interconnecting the board engagement platform and the board retention element by affixing the board retention element to at least one aperture, the apertures permitting the first distance to be adjusted in predetermined increments.

3. (currently amended) The rack of claim 2 wherein:

- the first distance is measured along a first axis; and
- the apertures ~~extend~~ are spaced along a second axis substantially parallel to the first axis.

4. (previously presented) The rack of claim 3 wherein:

- the edge engagement member is a linear engagement groove extending along a third axis; and
- the third axis is substantially perpendicular to the first axis.

5. (currently amended) In combination, a circuit board having first and second opposite edges spaced apart by a circuit board length and a rack supporting the board, the rack comprising:

- a frame;
- a board engagement platform mounted with respect to the frame and engaging the first edge;
- a board retention element spaced from the board engagement platform by a first distance;
- a first adjustment mechanism ~~capable of adjusting the first distance~~ coacting with the frame and the board retention element to provide adjustment of the first distance and maintaining to maintain the first distance; and
- a second adjustment mechanism ~~on~~ connected with respect to the board retention element and including an edge retention member for engaging the second edge;

and wherein:

- the board engagement platform and the edge retention member are spaced apart by an operative distance equal to the circuit board length such that the platform and the ~~second adjustment mechanism~~ edge retention member exert compressive force on the board by contacting the first and second opposite edges, respectively.

6. (currently amended) The combination of claim 5 wherein the second adjustment mechanism includes:

- a clamping screw threaded to the board retention element; and
- a locating pin mounted to the clamping screw for relative movement with respect to such screw, the pin including a notch ~~engaging~~ which operates as the edge retention member which engages the second edge of the ~~printed~~ circuit board.

7. (previously presented) The combination of claim 5 wherein:

- the board retention element includes a plurality of second adjustment mechanisms,
- each second adjustment mechanism has a respective clamping screw;
- each clamping screw is threaded to the board retention element; and
- each clamping screw has a respective locating pin mounted thereto.

8. (currently amended) The combination of claim 7 wherein:

- ~~the clamping screws are~~ each second adjustment mechanism has first, second and third clamping screws;
- ~~the locating pins are~~ first, second and third locating pins are mounted on the first, second and third clamping screws, respectively; and
- each locating pin is rotationally movable with respect to the respective clamping screw ~~on which it is mounted~~.

9. (previously presented) The combination of claim 5 wherein:

- the board has a substantially planar surface; and
- the compressive force is exerted substantially parallel to the planar surface.

10. (previously presented) The combination of claim 5 wherein:

- the board has a substantially planar surface; and
- the compressive force is exerted substantially coincident with the planar surface.

11-12. (previously canceled).

13. (currently amended) The support rack of claim 1 wherein:

- the board retention element has first and second ~~pluralities of~~ clamping screws threaded thereto; and
- ~~each clamping screw of the first plurality of clamping screws~~ the first clamping screw has a relatively-movable locating pin coupled thereto.

14. (currently amended) The support rack of claim 21 wherein:

- the board retention element has first and second pluralities of clamping screws threaded thereto;
- each clamping screw of the first and second pluralities ~~plurality and of the second plurality of clamping screws~~ has a locating pin coupled thereto;
- the circuit boards comprise first and second circuit boards;
- the first circuit board is clamped between the platform and the first plurality of clamping screws when supported by the support rack; and
- the second circuit board is clamped between the platform and the second plurality of clamping screws when supported by the support rack.

15. (previously presented) The combination of claim 22 wherein:

- the end panels are first and second end panels having, respectively, first and second rows of vertically-spaced-apart apertures;
- first and second screws extend, respectively, through an aperture of the first and second rows and engage the board retention element.

16. (previously presented) The combination of claim 15 wherein:

- the first and second rows of apertures and the first and second screws comprise the first adjustment mechanism whereby the first distance may be selected in predetermined increments; and
- the first plurality of clamping screws comprises the second adjustment mechanism whereby the second distance may be selected in a continuum.

17-20. (previously canceled).

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Reply to Office Action of May 6, 2003

21. (currently amended) A support rack for supporting circuit boards, each circuit board having first and second opposite edges defining a length, the support rack comprising:

- a board engagement platform having edge engagement members, each edge engagement member being adapted for contact with respect to the first edge of a respective circuit board;
- a board retention element being connected with respect to the engagement platform and spaced from the engagement platform by a first distance; the board retention element having edge retention members, each edge retention member being adapted for contact with respect to the second edge of the respective circuit board, each edge retention member spaced from the board retention element by a second distance and aligned with a respective edge engagement member;
- a first adjustment mechanism interconnected with respect to the board engagement platform and the board retention element, the first adjustment mechanism permitting adjustment of the first distance; and
- a plurality of second adjustment mechanisms, each second adjustment mechanism being connected with respect to the board retention element and the respective edge retention member, each second adjustment mechanism permitting adjustment of the respective second distance;

whereby the first adjustment mechanism and each second adjustment mechanism ~~distances can~~
~~be~~ are independently ~~adjusted so that the respective edge engagement members and~~
~~adjustable to allow positioning of each~~ edge retention ~~members can~~ member at a respective
desired distance from a respective edge engagement member such that each edge engagement
member and respective edge retention member compress a respective circuit ~~boards~~ board ~~of~~
~~different lengths~~ by contacting the ~~respective~~ first and second edges of the respective circuit
board, when the circuit boards are supported by the support rack.

22. (currently amended) The support rack of claim 1 further comprising a frame including a pair of vertical, longitudinally-spaced end panels between which the board engagement platform and the board retention element are supported in spaced relationship to one another, and wherein the circuit ~~boards are~~ board is clamped therebetween when the circuit board is supported by the support rack.

23. (previously presented) The combination of claim 5 further including a vibratory table supporting the rack and the board, and wherein:

- the table includes a mounting surface having a plurality of holes formed therein;
- the rack includes a frame having plural openings formed therein; and
- fasteners extend through the openings into the holes, thereby securing the rack and the boards to the table.

24. (previously presented) The support rack of claim 21 wherein each edge engagement member is a linear engagement groove.

25. (currently amended) The support rack of claim 24 wherein each second adjustment mechanism includes a clamping screw and a locating pin, the clamping screw being threaded to the board retention element and ~~the~~ the locating pin being mounted to the clamping screw for relative movement with respect to such screw, the pin including a notch acting as the edge engagement member to engage the second edge of each respective circuit board.

26. (previously presented) The support rack of claim 21 wherein each second adjustment mechanism maintains the respective second distance after adjustment.

27. (new) In combination, a circuit board having first and second opposite edges and a rack supporting the board, the rack comprising:

- a frame;
- a board engagement platform mounted with respect to the frame and engaging the first edge;
- a board retention element spaced from the board engagement platform by a first distance;
- a first adjustment mechanism coacting with the frame and the board retention element to adjust and maintain the first distance; and
- a second adjustment mechanism connected with respect to the board retention element and engaging the second edge, the second adjustment mechanism including a clamping screw and a locating pin, the clamping screw threaded to the board retention element and the locating pin mounted to the clamping screw for relative movement with respect to such screw, the pin including a notch engaging the second edge of the circuit board;

and wherein the platform and the second adjustment mechanism exert compressive force on the board by contacting the first and second opposite edges, respectively.